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**SITE ASSESSMENT REPORT
FOR
WASTEX
EAST ST. LOUIS, CLAIR COUNTY, ILLINOIS
TDD: S05-9704-010
PAN: 7A1001SI**

JUNE 20, 1997

Prepared for:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency and Enforcement Response Branch
77 West Jackson Boulevard
Chicago, Illinois, 60604**

Prepared by: Stephanie Wenning
Stephanie Wenning, START Project Manager

Date: 6/23/97

Reviewed by: flask for MSR
Mary Jane Ripp, Assistant START Program Manager

Date: 6/23/97

Approved by: flask
Thomas Kouris, START Program Manager

Date: 6/23/97



ENVIRONMENTAL ACTION CORPORATION
International Specialists in the Environment

33 North Dearborn Street, Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

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1. Introduction

On April 14 1997, the United States Environmental Protection Agency (U.S. EPA) Enforcement and Emergency Response Branch (EERB) tasked the Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) to assist the U.S. EPA On-Scene Coordinator (OSC) Cindy Nolan, in performing a site assessment of the Wastex site, located in East St. Louis, Clair County, Illinois. START was requested under Technical Direction Document (TDD) S05-9704-010 to prepare and implement a Health and Safety Plan; conduct a site reconnaissance; perform air monitoring; collect samples and subcontract analytical services; document on-site activities; and evaluate potential threats to human health and the environment at this site. The site assessment was performed in accordance with the National Contingency Plan (NCP) in the Code of Federal Regulations (CFR) Section 300.415, to evaluate on-site conditions and possible threats to human health, welfare, and the environment. The START site assessment activities conducted on April 29, 1997, are summarized in this report.

2. Site Background

2.1 Site Description

The Wastex site is located at 301 South 15th Street, East St. Louis, St. Clair County, Illinois (Figure 2-1). The coordinates for the site are latitude 38°36'678" North and longitude 90°09'272" West. The site was formerly a solvent recovery facility and a gasoline distribution center for Amoco Oil Corporation, under the name of Collier Oil Company. The Wastex operations were moved to another location in 1980. The site is bordered on the south by 15th Street (Figure 2-2). On the east, the site is bordered by the H.H. Hall Construction Company. The site is bordered on the west and northwest by residential areas. An unnamed railroad borders the site to the north. The Lincoln High School is approximately 0.25 mile northwest of the site.

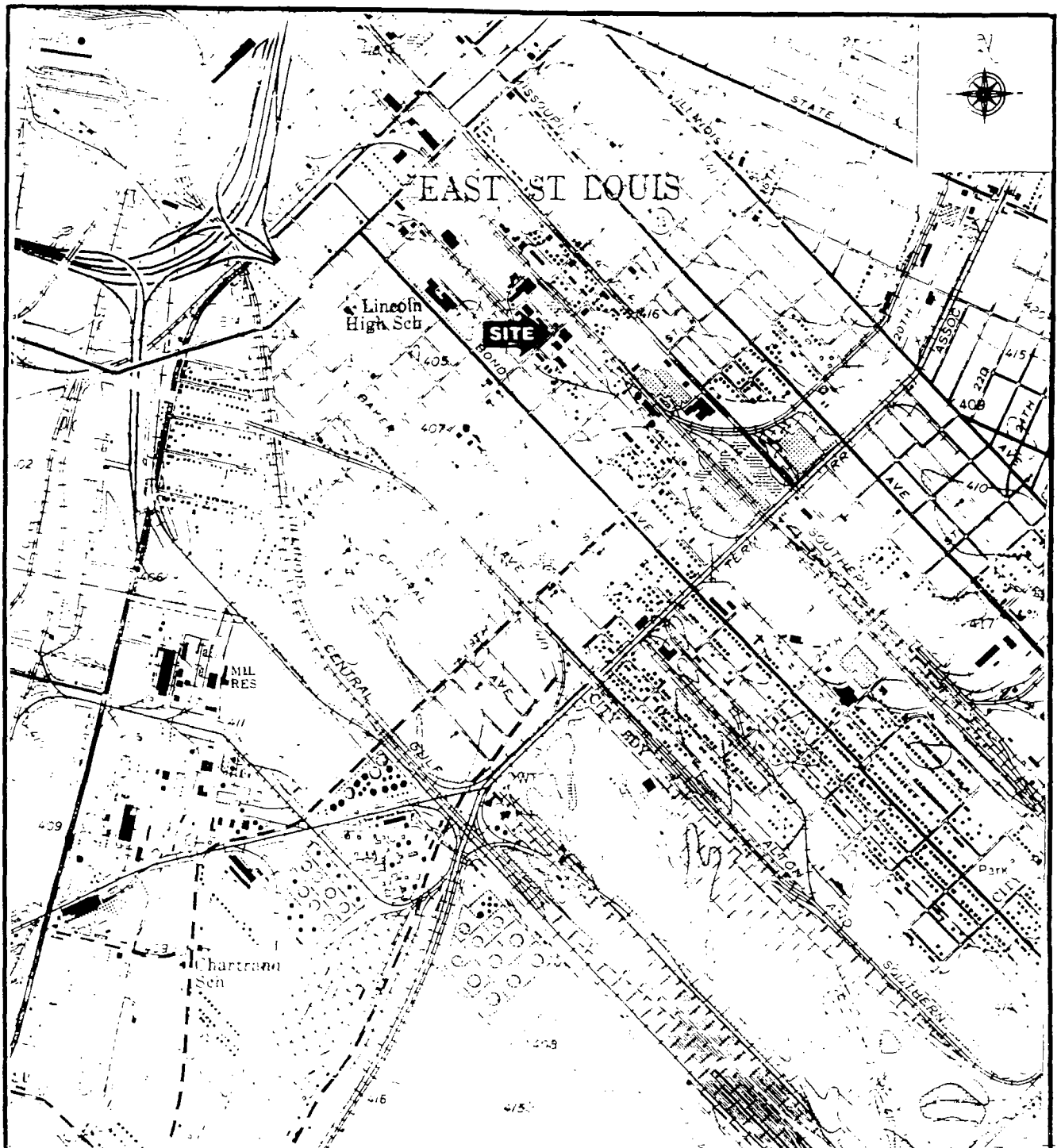
The Wastex site was a solvent recovery operation situated on approximately 1 acre of land. The property consists of two buildings, an aboveground fuel oil storage tank area, a loading dock, a truck unloading rack area, and an equipment shed. The Collier Oil Company building is located in the southwest corner of the property, adjacent to the Wastex building, which is located in the southeast corner of the property. The Wastex building is an abandoned warehouse containing thousands of cans of primer and house paint, five 20,000-gallon overhead bulk storage tanks and various other debris. The basement of this building is empty, but contains pipes which are wrapped with insulation material. The site is fenced and the main gate is chained shut, but the site is easily accessible through an open side gate in the fence, off of 15th Street.

2.1 Site History

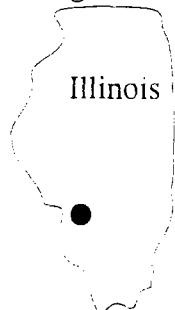
The site property was originally owned and operated by Standard Oil Corporation before 1977, and operated as a fuel transfer station. It is unknown when Standard Oil Corporation began operation at this site. The property was purchased by Mr. J.J. Guelbert in 1976 or 1977; and Mr. Guelbert opened Guelbert's Auto, an oil transfer station, in the building adjacent to the Wastex

building, on the southwest corner of the property.

Mr. Guelbert leased the Wastex site to Jack and Norma Chase who ran the waste recovery business in the Wastex building from 1977 to 1980. It is uncertain what the Chases called their operation at this time, but in October 1979, the operation was incorporated and named Wastex Research #1. Wastex operated at the 301 South 15th Street address from November 1979 to June 1980. The property was then bought by Mr. Joe Collier in 1979, who continued to lease the property to the Chases to run Wastex Research # 1. Mr. Collier renamed Guelbert's Auto the Collier Oil Company, and opened an Amoco oil distribution center in that building. It is unknown when Collier Oil Company ceased to operate at this facility.



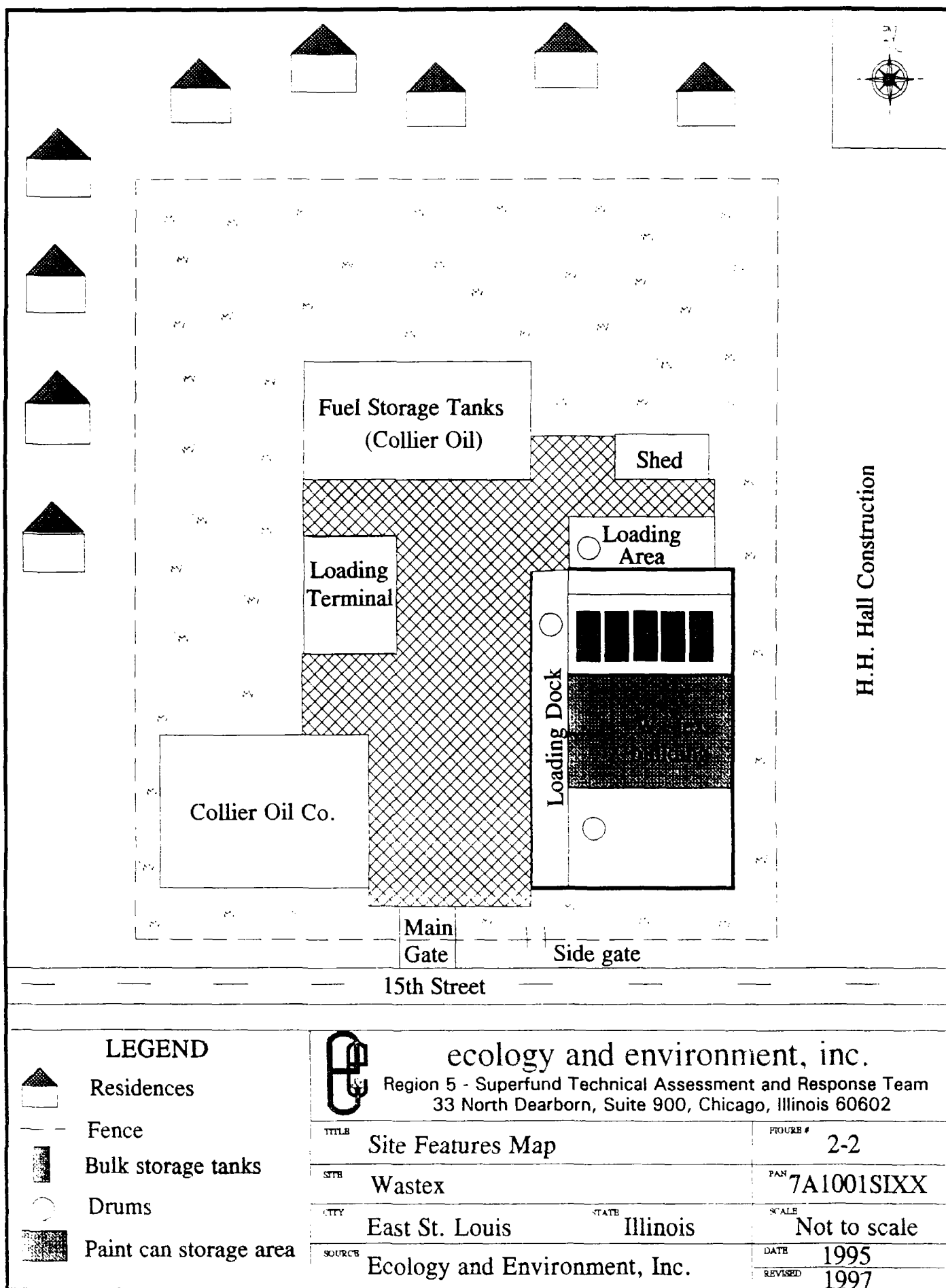
Quadrangle Location



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Region 5 - Superfund Technical Assessment and Response Team
33 North Dearborn, Suite 900, Chicago, Illinois 60602

TITLE	Site Location Map	FIGURE #	2-1
ITE	Wastex	PAN	7A1001SIXX
CITY	East St. Louis	STATE	Illinois
SCALE	USGS 7.5 Minute Series Cahokia, IL Quadrangle	SCALE	1:24,000
		DATE	1954
		PHOTOGRAPHED	1974



3. Site Assessment

START members Donovan Robin and Stephanie Wenning arrived at the Wastex site on April 29, 1997 at approximately 0900. After arriving at the site, START met with OSC Cindy Nolan, and Tom Miller of the Illinois Environmental Protection Agency (IEPA). The weather for the day was clear skies with a light wind and a temperature of approximately 70° Fahrenheit.

The following observations were made during the initiation of the site assessment:

- The site was fully fenced with an 8-foot chain link fence topped with 2 feet of barbed wire.
- The main gate to the site was chained and locked, but the side gate was open.

All attendees performed a reconnaissance of the site in order to determine potential risks and appropriate sample locations. Following the reconnaissance, OSC Nolan and START determined five sample locations. Level C personal protective equipment was donned prior to sampling activities. The first building examined was the Wastex building on the southeast corner of the property. The Wastex building consisted of five rooms and a basement. While in this building, the following observations were made:

- The first room contained one 55-gallon drum marked "Ford", and *various other debris, including trash, possibly from trespassers.*
- The second room contained boxes and pallets full of cans containing house paint and primer. A small office room located adjacent to this room also contained the same types of cans. The roof to the building was open in this room and the floor was wet.
- The next room contained five 20,000-gallon overhead bulk storage tanks. These tanks had leaked a black, oily type material onto the floor. There was a distinct odor of paint in this room and readings of 5.0 to 8.0 parts per million (ppm) were observed on the Photoionization Detector (PID) instrument.

- The last room was empty, except for some scattered debris.
- In the basement of the building more spilled material from the leaking tanks was observed, in addition to scattered debris. The pipes in the basement were wrapped in insulation that contained 25% asbestos.

At approximately 1330, START member Robin attempted to collect a sample from the bottom of an aboveground tank located outside the Collier Oil building. The tank contained only a small amount of sludge; therefore, no sample material was recovered. Sample WTX-2 was then collected from the basement of the Wastex building. The sample, collected from the piping insulation in the southwest corner of the room, was a white friable material. The sample was analyzed for asbestos.

The next two samples collected, WTX-3 and WTX-4, were collected from the floor below the five large aboveground tanks located in the north room of the Wastex building. WTX-3 was collected from the floor on the west side of the room and WTX-4 was collected from the floor on the east side of the room. The samples consisted of a black, plastic-like sheet of material with red stained powder and water underneath. Both of the samples were analyzed for Polychlorinated biphenyls (PCBs), flash point, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). The material in the tanks was not sampled at this time because of the inaccessibility of the tanks. In order to obtain a sample from the tanks, the sampler would have to climb a ladder to reach the manhole located on the top of the tank. This was determined to be unsafe at the time and therefore no samples were taken of the tank contents.

The final sample, WTX-5, was collected from one of the approximately 5,000 paint cans located in the middle rooms of the Wastex building. START Robin estimated that the Wastex building contained approximately 5,500 gallons of paint and primer. WTX-5 was removed from a can of primer which was partially mixed prior to sampling. According to the label on the can of primer, the can contained 27.6% mineral spirits. This sample was analyzed for flash point.

Subsequent to the site investigation, the samples were packaged and shipped via FedEx to EIS Environment Labs in South Bend, Indiana. A U.S. EPA Office of Solid Waste and Emergency Response (OSWER) Quality Assurance Level II data package was requested. All samples were analyzed under START Analytical TDD S05-9704-809.

On May 21, 1997, START member Wenning returned to the site to collect split samples from the sampling team hired by a potentially responsible party (PRP) identified by OSC Nolan. Present at the site were OSC Nolan, START Wenning, Timothy Vujnich of Riverside Financial Ventures and one of his employees, Gregory Haug of Environmental Concepts, Inc.. Denny Cox of Superior

Equipment, and James Foley and Phil Meyer of Environmental Solutions, Inc. Mr. Vujnich is the PRP identified by OSC Nolan and all other people present, except START, were hired by Mr. Vujnich.

The team from Environmental Solutions planned to collect samples from the five large aboveground tanks in the Wastex building and the samples were to be split with U.S. EPA. During a site reconnaissance, it was discovered that all of the valves had been stripped from the tanks and pipes in the room. In order to determine the contents of the tanks, Foley climbed to the top of the tanks. The manhole had previously been removed from the second tank at the north end of the room, Tank 2, and inside Foley observed approximately 2 feet of brown sludge. Foley also smelled fumes near the manhole of the tank and OSC Nolan then requested START to perform air monitoring. Using a Combustible Gas Indicator (CGI), START detected elevated levels of lower explosive limit (LEL) gas and carbon monoxide (CO). The CGI indicated 94% LEL and 37 ppm CO in the tank, approximately 3 feet from the sludge material. START then used a PID to measure for the presence of VOCs in the room. At the breathing level in the room, the PID detected levels of VOCs between 8 and 10 ppm. When the PID was placed near an open valve at the bottom of Tank 2, the readings from the PID spiked to 35 ppm, and then fluctuated between 16 and 25 ppm.

After leaving the building, OSC Nolan discussed the results of the air monitoring activities with the PRP and the Environmental Solutions team. The air monitoring results indicated that any sampling activities performed from the tanks would require Level B personal protection. Because the team from Environmental Solutions was not equipped to perform sampling in Level B protection at the time, it was determined that no samples would be collected from the five 20,000-gallon tanks. The PRP then secured the site, boarded up and locked all entry paths into the buildings, and locked all the gates. No trespassing signs were also posted.

4. Analytical Results

Analytical results indicate that the waste materials on site demonstrate ignitability characteristics, as defined by the Resource Conservation and Recovery Act (RCRA) for hazardous wastes. Analytical results are summarized in Table 4-1. The validated data package is presented in Appendix B.

The RCRA hazardous waste criteria (40 CFR Subsection [§] 261) define characteristics for hazardous wastes. The characteristic of an ignitable waste, as defined in 40 CFR § 261.21, exhibits a flash point less than 140°F. The samples of spilled material from the aboveground tanks, WTX-3 and WTX-4, had flash points of 138°F and 139°F, respectively. The sample from the can of primer, WTX-5, had a flash point of 104°F. All of these samples exhibit the characteristics of ignitable waste as defined by 40 CFR 261.21.

Samples WTX-3 and WTX-4 were also analyzed for VOCs and SVOCs. The samples both contained VOCs classified as hazardous waste according to 40 CFR 261.31. Xylene and ethylbenzene are classified by the RCRA waste code F003, and toluene is classified by the waste code F005.

PCBs, as well as asbestos, are regulated under the Toxic Substances Control Act (TSCA). PCBs were not detected in any of the samples; however, the sample from the piping insulation, WTX-2, contained asbestos. The analytical results detected 25% chrysotile asbestos in WTX-2.

<p style="text-align: center;">Table 4-1 SUMMARY OF ANALYTICAL RESULTS WASTEX MAY 20, 1997</p>				
Parameter	Sample Designation			
	WTX-2	WTX-3	WTX-4	WTX-5
Flash point (°F)	NA	138	139	104
Asbestos (%)	25	NA	NA	NA
Ethylbenzene (mg/kg)	NA	24	370	NA
Toluene (mg/kg)	NA	7.1	120	NA
PCBs (mg/kg)	NA	ND	ND	NA
Total xylenes (mg/kg)	NA	190	1,660	NA

Key:

mg/kg = Milligrams per kilogram.

NA = Not analyzed.

ND = Not detected.

Source: EIS Analytical Services, Inc., South Bend, Indiana, May 16, 1997
 (Analytical TDD S05-9704-809).

5. Discussion of Potential Threats

Conditions observed during the U.S. EPA investigation of the Wastex site that constitute a threat to human health and/or the environment, and may be used to determine the appropriateness of a removal action, as outlined in Section 300.415 (b)(2) of NCP, include:

- **Threat of fire or explosion.** The approximately 5,500 gallons of paint material, and the material that has leaked onto the floor from the aboveground tanks have flash points below the RCRA regulatory limit for ignitability of 140°F. The large known volume of ignitable material, as well as the unknown quantity of ignitable material in the aboveground tanks, pose a serious threat of fire or explosion.
- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.** Conditions at the Wastex site present a potential for exposure of nearby populations to hazardous materials. The material from the aboveground tanks, and the paint and primer both have a flash point of less than 140°F and are therefore considered ignitable and hazardous. Furthermore, ethylbenzene, toluene, and total xylenes were detected in the samples from the floor beneath the aboveground tanks. Additionally, the air monitoring performed during the second site visit indicated a potential threat from the material still present in the aboveground tanks. Long-term exposure to ethylbenzene, toluene, and total xylenes may cause damage to the brain, liver, kidney, lungs, and blood tissue. Also present in the basement of the building was asbestos. Asbestos has also been shown to be a carcinogen. Long-term exposure may result in lung cancer or other chronic damage to the lungs. A school is located within a quarter of a mile from the site and access to the site could easily be gained. A potential exists for trespassers to come in contact with hazardous substances located on the site property.
- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.** The material from the aboveground tanks that leaked onto the floor of the Wastex building contained ethylbenzene, toluene, and xylene; which are constituents of hazardous wastes from nonspecific sources under RCRA. All of the valves have been stripped from the tanks; and therefore, the material will continue leaking out of the tanks and onto the floor. The site is accessible; unauthorized persons could enter the site and

come into contact with hazardous materials. Additionally, the paint cans present on the site are ignitable and therefore are a hazardous substance. Many of these cans are deteriorated and opened; therefore, they may pose a threat of release.

6. Summary

It is recommended that actions be taken to mitigate the environmental and human health threats resulting from the presence of RCRA hazardous waste at the Wastex site. Due to the serious fire and explosion threat on site, easy site access, and the presence of a nearby school, there is a significant potential for nearby populations to be exposed to hazardous substances. There is evidence, such as the stripping of all the valves from the aboveground tanks, that metal salvagers have been able to gain access to the site. Furthermore, not all containers of potentially hazardous waste were sampled during this site investigation. The site should be secured, and the fire and explosion threat eliminated.

7. Removal Alternatives/Cost Estimate

Based on observations made during the U.S. EPA site assessment, and analytical results from samples collected at the Wastex site, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal action is warranted. This removal action should include securing the site and eliminating the fire and explosion threat from the site. The primary focus of the removal action will be to mitigate environmental and health threats resulting from the presence of ignitable material, as defined by RCRA. Additional activities to adequately determine the nature and volume of any hazardous materials present at the site will be necessary.

The cleanup cost estimate, calculated using the Removal Cost Management System (RCMS) Version 4.2 program (Appendix C), includes cleanup contractor and subcontractor, U.S. EPA, and START costs; and totals approximately \$430,000.

7.1 General Assumptions

- The removal action will include removal of approximately 8,000 cans of paint material, 25,000 gallons of tank sludge and approximately 20 yards (one roll-off box) of asbestos-containing material that will be transported from the site for disposal.
- The site work will be completed in thirty 12-hour days.
- The removal will be conducted by an Emergency Response Cleanup Services (ERCS) contractor.
- ERCS personnel will include one response manager, one foreman, one field clerk, and four laborers.
- One U.S. EPA OSC and one START member will be on site during the removal action.
- One armed security guard will be on site 24-hours per day for the duration of the project.

- RCMS cost projection defaults include a 15% contractor contingency.
- The removal of the tank sludge will be performed in Level B protective equipment. The tanks will be emptied using a water laser to cut open the bottom of the tanks, and the sludge will then be removed and disposed of off site.
- The paint material will remain in sealed cans and placed into cubic-yard boxes for disposal. These boxes can accommodate approximately 50 one-quart cans per box or 25 one-gallon cans per box. Assuming that 6,000 of the paint cans are quart size and 2,000 of the paint cans are gallon size, it will require 200 cubic-yard boxes for disposal.
- Approximately 200 of the paint cans are open and will have to be disposed of by overpacking the cans into 55-gallon drums. Approximately fifteen 55-gallon drums will be required.
- The off-site transportation of the packaged waste will consist of 25 truck loads of waste.

Appendix A
Photodocumentation



SITE: Wastex

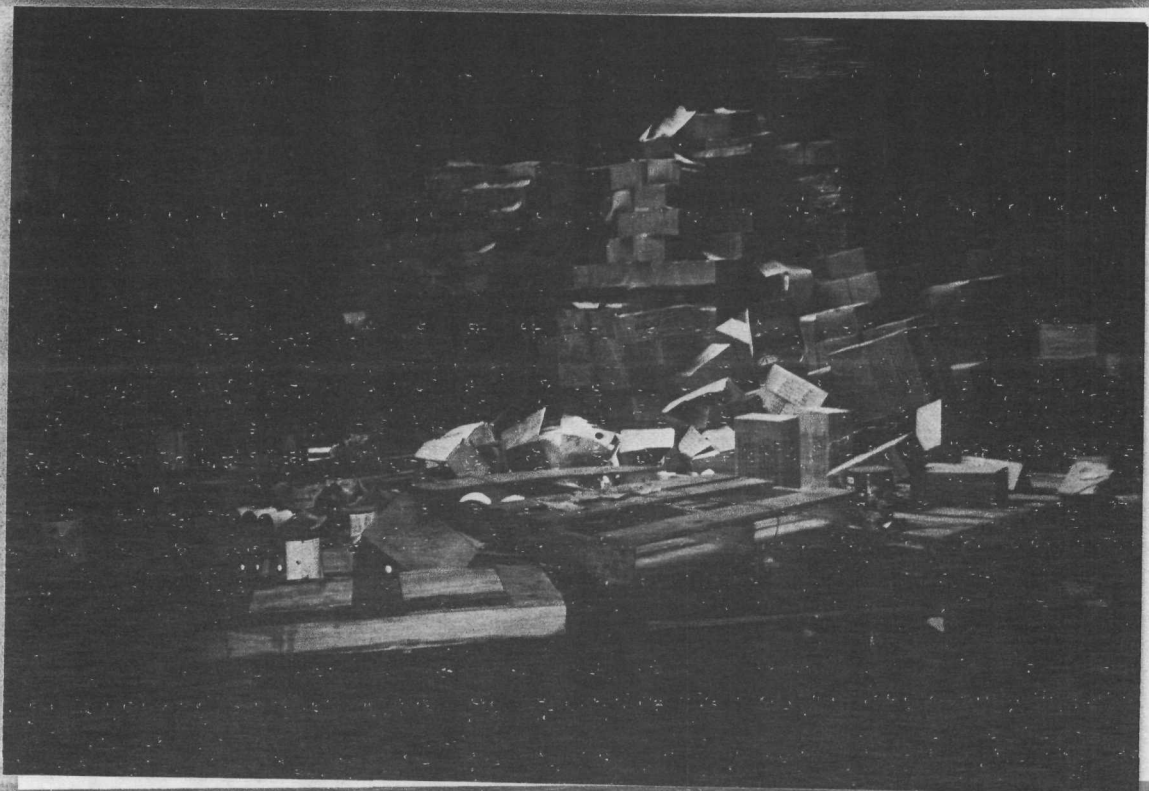
DATE: April 29, 1997

TIME: 1115

LOCATION: East St. Louis, IL **DIRECTION:** South

PHOTOGRAPHER: D. Robin

SUBJECT: Paint drum located in south room of Wastex building.



SITE: Wastex

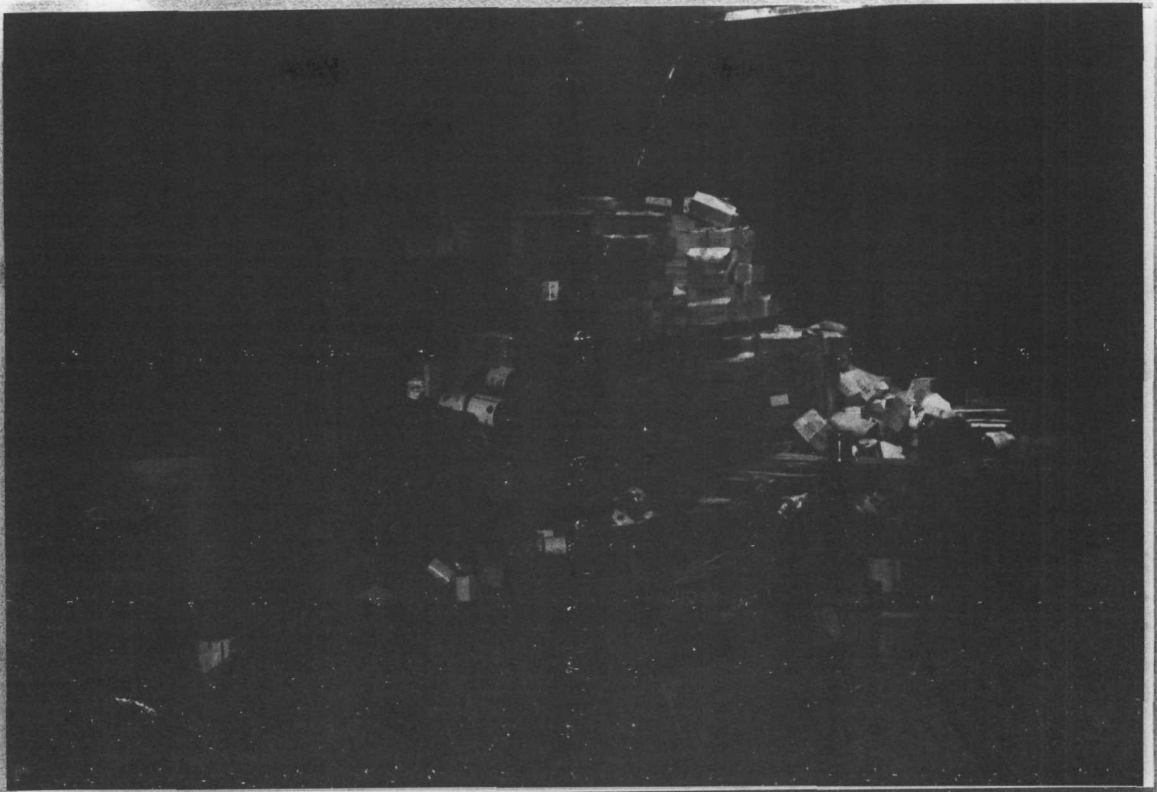
DATE: April 29, 1997

TIME: 1118

LOCATION: East St. Louis, IL **DIRECTION:** Northwest

PHOTOGRAPHER: D. Robin

SUBJECT: Boxes containing paint cans located in middle room of Wastex building.



SITE: Wastex

DATE: April 29, 1997

TIME: 1126

LOCATION: East St. Louis, IL **DIRECTION:** Southwest

PHOTOGRAPHER: D. Robin

SUBJECT: Boxes containing paint cans located in middle room of Wastex building.



SITE: Wastex

DATE: May 21, 1997

TIME: 1130

LOCATION: East St. Louis, IL **DIRECTION:** West

PHOTOGRAPHER: S. Wenning

SUBJECT: Side gate in exterior fencing

Appendix B
Analytical Data Package



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33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: May 20, 1997

TO: Stephanie Wenning, START Project Manager, E & E,
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,
E & E, Chicago, Illinois

THROUGH: Patrick Zwilling, START Assistant Program Manager,
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Polychlorinated Biphenyls
(PCBs), Wastetex, East St. Louis, St. Clair County,
Illinois

REFERENCE: Project TDD S05-9704-010 Analytical TDD S05-9704-809
Project PAN 7A1001SIXX Analytical PAN 7AAI01TAXX

The data quality assurance (QA) review of two drum waste samples collected from the Wastetex site is complete. The samples were collected on April 29, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8080.

Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
WTX-3	42346
WTX-4	42347

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on April 29, 1997, extracted on and analyzed on May 6, 1997. This is within the 14-day holding time from collection to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in samples, when dilution was not required.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for all PCBs.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%, for all detected PCBs.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Acceptable

There were no PCBs detected in the samples.

VI. Additional QC Checks: Not Applicable

The recoveries of the surrogates used in the samples could not be determined due to sample dilution.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 6.0, Pesticides/PCBs. Based upon the information provided, the data are acceptable for use.



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International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: May 20, 1997

TO: Stephanie Wenning, START Project Manager, E & E,
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,
E & E, Chicago, Illinois

THROUGH: Patrick Zwilling, START Assistant Program Manager,
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Flash Point and Asbestos,
Wastetex, East St. Louis, St. Clair County, Illinois

REFERENCE: Project TDD S05-9704-010 Analytical TDD S05-9704-809
Project PAN 7A1001SIXX Analytical PAN 7AAI01TAXX

The data quality assurance (QA) review of three drum waste samples and one solid sample collected from the Wastetex site is complete. The samples were collected on April 29, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 1010 (flash point) and polarized light microscopy (PLM) (asbestos).

Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
WTX-2	42345
WTX-3	42346
WTX-4	42347
WTX-5	42348

Wastetex
Project TDD S05-9704-010
Analytical TDD S05-9704-809
Flash Point, Asbestos
Page 2

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on April 29, 1997, and analyzed on May 8, 1997. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify holding times for these parameters.

II. Calibration: Acceptable

The calibration for flash point was verified before analysis, and was within quality control limits.

III. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.



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International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: May 29, 1997

TO: Stephanie Wenning, START Project Manager, E & E,
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,
E & E, Chicago, Illinois

THROUGH: Patrick Zwilling, START Assistant Program Manager,
E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Volatile Organic
Compounds, Wastetex, East St. Louis, St. Clair
County, Illinois

REFERENCE: Project TDD S05-9704-010 Analytical TDD S05-9704-809
Project PAN 7A1001SIXX Analytical PAN 7AAI01TAXX

The data quality assurance (QA) review of two drum waste samples collected from the Wastetex site is complete. The samples were collected on April 29, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8260.

Sample Identification

<u>START Identification No.</u>	<u>Laboratory Identification No.</u>
WTX-3	42346
WTX-4	42347

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on April 29, 1997, and analyzed on May 7, 1997. This is within the 14-day holding time limit.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:
Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and samples were analyzed within 12 hours of BFB tuning.

III. Calibrations:

• Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05 except acrolein and nitrobenzene; therefore, the nondetect values for these compounds have been flagged "R", as required. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Not Applicable

The recoveries of the surrogates used in the samples and blank could not be determined due to sample dilution.

Wastetex
Project TDD S05-9704-010
Analytical TDD S05-9704-809
VOA
Page 3

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions:

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.



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Chicago, Illinois 60602
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M E M O R A N D U M

DATE: May 20, 1997

TO: Stephanie Wenning, START Project Manager, E & E,
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,
E & E, Chicago, Illinois

THROUGH: Patrick Zwilling, START Assistant Program Manager,
E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Semivolatile Organic
Compounds, Wastetex, East St. Louis, St. Clair
County, Illinois

REFERENCE: Project TDD S05-9704-010 Analytical TDD S05-9704-809
Project PAN 7A1001SIXX Analytical PAN 7AAI01TAXX

The data quality assurance (QA) review of two drum waste samples collected from the Wastetex site is complete. The samples were collected on April 29, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8270.

Sample Identification

<u>START Identification No.</u>	<u>Laboratory Identification No.</u>
WTX-3	42346
WTX-4	42347

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on April 29, 1997, and analyzed on May 2, 1997. This is within the 14-day holding time limit.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:
Acceptable

GC/MS tuning to meet ion abundance criteria using decafluorotriphenylphosphine (DFTPP) were acceptable and samples were analyzed within 12 hours of DFTPP tuning.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within laboratory-established guidelines.

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VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 4.0, BNAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use.

SAMPLE RESULTS

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CLIENT SAMPLE ID: WTX-3

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
PCB (AR1016)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081
PCB (AR1221)	nd	mg/kg(wet)	10	0.2	KlepperW	5/6/97	8081
PCB (AR1232)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081
PCB (AR1242)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081
PCB (AR1248)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081
PCB (AR1254)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081
PCB (AR1260)	nd	mg/kg(wet)	5	0.1	KlepperW	5/6/97	8081

SAMPLE RESULTS

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CLIENT SAMPLE ID: V.

Date Collected: 4/28/97

Date Received: 5/1/97

Site:

State:

County:

Report Date: 5/16/97

EIS Sample No: 042347

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
PCB (AR1016)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081
PCB (AR1221)	nd	mg/kg(wet)	4	0.2	KlepperW	5/6/97	8081
PCB (AR1232)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081
PCB (AR1242)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081
PCB (AR1248)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081
PCB (AR1254)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081
PCB (AR1260)	nd	mg/kg(wet)	2	0.1	KlepperW	5/6/97	8081

ANALYSIS RESULTS

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CLIENT SAMPLE ID: WTX-3

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	138	Fahrenheit			SzkarlatM	5/8/97	1010

GAME REPORT

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CLIENT SAMPLE ID: WTX-4

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/18/97

EIS Sample No: 042347

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Dist	Test Date	Method
Ignitability (Closed Cup)	139	Fahrenheit			karlatM	5/8/97	1010

SAMPLE RESULTS

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CLIENT SAMPLE ID: WTX-5

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042348

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	104	Fahrenheit			SzkariatM	5/8/97	1010



Mr David Hendren
Ecology & Environment, Inc.
33 North Dearborn, Suite 900
Chicago, IL 60602

Tel No: 312-578-9243

Fax No: 312-578-9345

PO No:

Project Name: WASTETEX 7A1001S1

Report Date: 5/16/97

EIS Order No: 970500017

EIS Sample No: 042345

EIS Project No: 2009-1001-97

Client Sample ID: WTX-2

Date Collected: 4/29/97

Date Received: 5/1/97

Collected By: Client

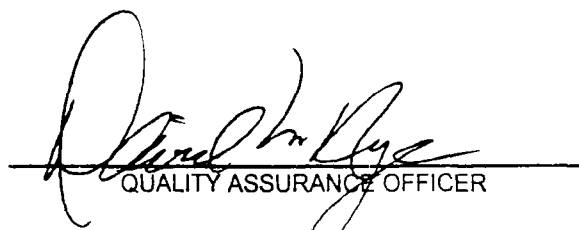
This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

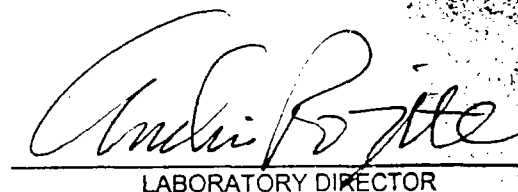
DEFINITIONS:

— MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.

SDL = Sample Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.


QUALITY ASSURANCE OFFICER


LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

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CLIENT NAME: TX-2

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042345

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Actinolite	nd	%	1	1	DialsM	5/8/97	PLM
Amosite	nd	%	1	1	DialsM	5/8/97	PLM
Anthophyllite	nd	%	1	1	DialsM	5/8/97	PLM
Chrysotile	25	%	1	1	DialsM	5/8/97	PLM
Crocidolite	nd	%	1	1	DialsM	5/8/97	PLM
Tremolite	nd	%	1	1	DialsM	5/8/97	PLM

SAFETY RESULTS

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CLIENT SAMPLE ID: WTX-3

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Acetone	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Acrolein	nd R	mg/kg(wet)	40	1	MyersN	5/7/97	8260A
Acrylonitrile	nd	mg/kg(wet)	40	1	MyersN	5/7/97	8260A
Benzene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Bromobenzene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Bromochloromethane	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Bromodichloromethane	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Bromoform	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Bromomethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Butylbenzene (normal)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Butylbenzene (tert)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Carbon disulfide	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Carbon Tetrachloride	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Chlorobenzene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Chloroethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Chloroethyl vinyl ether (2)	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Chloroform	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Chlorohexane (1)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Chloromethane	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Chlorotoluene (2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Chlorotoluene (4)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Cyclohexanone	nd	mg/kg(wet)	200	5	MyersN	5/7/97	8260A
Dibromo-3-chloropropane (1,2)	nd	mg/kg(wet)	60	1.5	MyersN	5/7/97	8260A
Dibromochloromethane	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dibromoethane (1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dibromomethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloro-2-butene (1,4)	nd	mg/kg(wet)	60	1.5	MyersN	5/7/97	8260A
Dichlorobenzene (1,2)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichlorobenzene (1,3)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichlorobenzene (1,4)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichlorodifluoromethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloroethane (1,1)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dichloroethane (1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dichloroethene (1,1)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloroethene (c-1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dichloroethene (t-1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dichlorofluoromethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloropropane (1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Dichloropropane (1,3)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloropropane (2,2)	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Dichloropropene (1,1)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A

SAMPLE RESULTS

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CLIENT SAMPLE ID: WTX-3

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	M	Analyst	Test Date	Method
Dichloropropene (c-1,3)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Dichloropropene (t-1,3)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Diethyl ether	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Ethyl methacrylate	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Ethylbenzene	24	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Heptane (normal)	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Hexachlorobutadiene	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Hexanone (2-)	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Iodomethane	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Isopropylbenzene	9.0	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Isopropyltoluene (para)	9.9	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Methyl Ethyl Ketone (MEK)	26	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Methyl Isobutyl Ketone (MIBK)	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Methyl methacrylate	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Methylbutylether (tert) (MTBE)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Methylene chloride	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Naphthalene	35	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Nitrobenzene	nd R	mg/kg(wet)	100	2.5	MyersN	5/7/97	8260A
Propylbenzene (normal)	8.4	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
sec-Butylbenzene	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Styrene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Tetrachloroethane (1,1,1,2)	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Tetrachloroethane (1,1,2,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Tetrachloroethene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Tetrahydrofuran	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Toluene	7.1	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
TPH	9750	mg/kg(wet)	400	10	MyersN	5/7/97	8260A
Trichlorobenzene (1,2,3)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Trichloroethane (1,1,1)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Trichloroethane (1,1,2)	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Trichloroethene	nd	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Trichlorofluoromethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Trichloropropane (1,2,3)	nd	mg/kg(wet)	10	0.25	MyersN	5/7/97	8260A
Trichlorotrifluoroethane	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Trimethylbenzene (1,2,4)	68	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Trimethylbenzene (1,3,5)	29	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Vinyl acetate	nd	mg/kg(wet)	20	0.5	MyersN	5/7/97	8260A
Vinyl Chloride	nd	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A
Xylene (ortho)	70	mg/kg(wet)	2	0.05	MyersN	5/7/97	8260A
Xylenes (meta + para)	120	mg/kg(wet)	4	0.1	MyersN	5/7/97	8260A

SAMPLE RESULTS

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CLIENT SAMPLE : WTX-4

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/1/97

EIS Sample No: 04247

EIS Order No: 91100017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Acetone	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Acrolein	nd R	mg/kg(wet)	200	1	MyersN	5/7/97	8260A
Acrylonitrile	nd	mg/kg(wet)	200	1	MyersN	5/7/97	8260A
Benzene	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Bromobenzene	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Bromochloromethane	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Bromodichloromethane	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Bromoform	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Bromomethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Butylbenzene (normal)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Butylbenzene (tert)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Carbon disulfide	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Carbon Tetrachloride	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Chlorobenzene	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Chloroethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Chloroethyl vinyl ether (2)	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Chloroform	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Chlorohexane (1)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Chloromethane	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Chlorotoluene (2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Chlorotoluene (4)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Cyclohexanone	nd	mg/kg(wet)	1000	5	MyersN	5/7/97	8260A
Dibromo-3-chloropropane (1,2)	nd	mg/kg(wet)	300	1.5	MyersN	5/7/97	8260A
Dibromochloromethane	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dibromoethane (1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dibromomethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloro-2-butene (1,4)	nd	mg/kg(wet)	300	1.5	MyersN	5/7/97	8260A
Dichlorobenzene (1,2)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichlorobenzene (1,3)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichlorobenzene (1,4)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichlorodifluoromethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloroethane (1,1)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dichloroethane (1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dichloroethene (1,1)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloroethene (c-1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dichloroethene (t-1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dichlorofluoromethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloropropane (1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Dichloropropane (1,3)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloropropane (2,2)	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Dichloropropene (1,1)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A

CLIENT SAMPLE ID: WTX-4

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042347

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropene (c-1,3)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Dichloropropene (t-1,3)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Diethyl ether	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Ethyl methacrylate	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Ethylbenzene	370	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Heptane (normal)	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Hexachlorobutadiene	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Hexanone (2-)	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Iodomethane	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Isopropylbenzene	50	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Isopropyltoluene (para)	39	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Methyl Ethyl Ketone (MEK)	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Methyl isobutyl Ketone (MIBK)	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Methyl methacrylate	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Methylbutylether (tert) (MTBE)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Methylene chloride	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Naphthalene	190	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Nitrobenzene	nd R	mg/kg(wet)	500	2.5	MyersN	5/7/97	8260A
Propylbenzene (normal)	43	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
sec-Butylbenzene	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Styrene	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Tetrachloroethane (1,1,1,2)	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Tetrachloroethane (1,1,2,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Tetrachloroethene	11	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Tetrahydrofuran	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Toluene	120	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
TPH	61700	mg/kg(wet)	2000	10	MyersN	5/7/97	8260A
Trichlorobenzene (1,2,3)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Trichloroethane (1,1,1)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Trichloroethane (1,1,2)	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Trichloroethene	nd	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Trichlorofluoromethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Trichloropropane (1,2,3)	nd	mg/kg(wet)	50	0.25	MyersN	5/7/97	8260A
Trichlorotrifluoroethane	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Trimethylbenzene (1,2,4)	270	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Trimethylbenzene (1,3,5)	110	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Vinyl acetate	nd	mg/kg(wet)	100	0.5	MyersN	5/7/97	8260A
Vinyl Chloride	nd	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A
Xylene (ortho)	490	mg/kg(wet)	10	0.05	MyersN	5/7/97	8260A
Xylenes (meta + para)	1170	mg/kg(wet)	20	0.1	MyersN	5/7/97	8260A

SAMPLE RESULTS

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CLIENT SAMPLE ID: WTX-3

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Acenaphthene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Acenaphthylene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Aniline	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Anthracene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benidine	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Benzo(a)anthracene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benzo(a)pyrene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benzo(b)fluoranthene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benzo(ghi)perylene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benzo(k)fluoranthene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Benzoic acid	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Benzyl alcohol	nd	mg/kg(wet)	512	1	DavisW	5/2/97	8270B
Bis(2-chloroethoxy)methane	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Bis(2-chloroethyl)ether	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Bis(2-chloroisopropyl)ether	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Bis(2-ethylhexyl)phthalate	103000	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Bromophenyl-phenylether (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Butyl benzyl phthalate	530	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chloro-3-methylphenol (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chloroaniline (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chloronaphthalene (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chlorophenol (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chlorophenyl phenyl ether (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Chrysene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Di-n-butylphthalate	620	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Di-n-octylphthalate	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dibenzo(a,h)anthracene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dibenzofuran	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,3)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dichlorobenzidine (3,3')	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dichlorophenol (2,4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Diethyl phthalate	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dimethyl phthalate	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dimethylphenol (2,4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dinitrophenol (2,4)	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Dinitrotoluene (2,4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Dinitrotoluene (2,6)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Diphenylhydrazine (1,2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Fluoranthene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B

AMPLE RESULTS

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CLIENT SAMPLE ID: WTX-2

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042346

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Fluorene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Hexachlorobenzene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Hexachlorobutadiene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Hexachlorocyclopentadiene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Hexachloroethane	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Indeno(1,2,3-cd)pyrene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Isophorone	1720	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Methyl-4,6-dinitrophenol (2)	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Methylnaphthalene (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Methylphenol (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Methylphenol (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Naphthalene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitroaniline (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitroaniline (3)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitroaniline (4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitrobenzene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitrophenol (2)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitrophenol (4)	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Nitroso-di-methylamine (normal)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitroso-di-n-propylamine (normal)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Nitroso-di-phenylamine (normal)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Pentachlorophenol	nd	mg/kg(wet)	1280	2.5	DavisW	5/2/97	8270B
Phenanthrene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Phenol	280	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Pyrene	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Pyridine	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Trichlorophenol (2,4,5)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B
Trichlorophenol (2,4,6)	nd	mg/kg(wet)	256	0.5	DavisW	5/2/97	8270B

SAMPLE REPORT

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CLIENT SAMPLE ID: WTX-4

Date Collected: 4/29/97

Date Received: 5/1/97

Report Date: 5/16/97

EIS Sample No: 042347

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Acenaphthene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Acenaphthylene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Aniline	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Anthracene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzidine	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Benzo(a)anthracene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzo(a)pyrene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzo(b)fluoranthene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzo(ghi)perylene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzo(k)fluoranthene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Benzoic acid	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Benzyl alcohol	nd	mg/kg(wet)	514	1	DavisW	5/2/97	8270B
Bis(2-chloroethoxy)methane	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Bis(2-chloroethyl)ether	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Bis(2-chloroisopropyl)ether	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Bis(2-ethylhexyl)phthalate	19900	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Bromophenyl-phenylether (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Butyl benzyl phthalate	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chloro-3-methylphenol (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chloroaniline (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chloronaphthalene (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chlorophenol (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chlorophenyl phenyl ether (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Chrysene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Di-n-butylphthalate	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Di-n-octylphthalate	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dibenzo(a,h)anthracene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dibenzofuran	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,3)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dichlorobenzene (1,4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dichlorobenzidine (3,3')	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dichlorophenol (2,4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Diethyl phthalate	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dimethyl phthalate	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dimethylphenol (2,4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dinitrophenol (2,4)	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Dinitrotoluene (2,4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Dinitrotoluene (2,6)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Diphenylhydrazine (1,2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Fluoranthene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B

SAMPLE RESULTS

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CLIENT SAMPLE ID: WTX-4

Date Collected: 4/29/97

Date Received: 5/1/97

Rep. Date: 5/16/97

EIS Sample No: 04237

EIS Order No: 970500017

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Fluorene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Hexachlorobenzene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Hexachlorobutadiene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Hexachlorocyclopentadiene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Hexachloroethane	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Indeno(1,2,3-cd)pyrene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Isophorone	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Methyl-4,6-dinitrophenol (2)	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Methylnaphthalene (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Methylphenol (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Methylphenol (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Naphthalene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitroaniline (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitroaniline (3)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitroaniline (4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitrobenzene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitrophenol (2)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitrophenol (4)	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Nitroso-di-methylamine (normal)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitroso-di-n-propylamine (normal)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Nitroso-di-phenylamine (normal)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Pentachlorophenol	nd	mg/kg(wet)	1285	2.5	DavisW	5/2/97	8270B
Phenanthrene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Phenol	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Pyrene	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Pyridine	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Trichlorophenol (2,4,5)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B
Trichlorophenol (2,4,6)	nd	mg/kg(wet)	257	0.5	DavisW	5/2/97	8270B

Appendix C
RCMS Cost Projection

Cost Summary

Page: 1

Projection Name: WASTEX.RES

Date: 05/28/97

Projection Type: Initial

Prime Contractor: RES5

	Projection	Archive	Total
CONTRACTOR			
Personnel Cost	98818	0	98818
Equipment Cost	18964	0	18964
Other Direct Cost	209628	0	209628
	-----	-----	-----
Total for Contractor	327410	0	327410
Contractor Contingency:15.00%			49112

Including Contractor Contingency			376522
Site Contingency:0.00%			0

Including Site Contingency			376522
GOVERNMENT			
Personnel Cost	43407	0	43407
Equipment Cost	900	0	900
Other Direct Cost	10224	0	10224
	-----	-----	-----
Total for Government	54531	0	54531
Site Contingency: 0.00%			0

Including Site Contingency			54531
			=====
PROJECT TOTAL			431053

APPENDIX C
RCMS COST PROJECTION (DETAILED BREAKDOWN)
05/28/97
6 PAGES

REDACTED

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION